

76. In sum, the Commission should find that the ILECs currently possess market power with respect to “local” larger-business broadband services, and that after they are permitted to offer long distance, they will possess market power with respect to “regional” services (with a “region” consisting of the incumbent’s home territory). The RBOCs should therefore be regulated as dominant carriers with respect to such services.

V. Mass Market Services

77. In this section, I discuss the mass-market broadband services provided both to residential customers and to businesses, which (as Crandall and Sidak point out) are used “almost exclusively to access Internet service providers and the Internet.”⁶⁴

A. The Artificiality of the Boundary Between Broadband and Narrowband

78. Regardless of whether narrowband and broadband would be regarded as separate relevant markets under the antitrust laws, I believe that the Commission should consider both forms of Internet access together when designing the appropriate regulatory regime. An exemption of broadband from retail regulations – regulations that are clearly proper for voice and other “narrowband” services – would be artificial and irrational. It would disserve the public interest if the Commission were to treat broadband as a world separate and apart from narrowband, given the interrelationships and common characteristics of these services.

79. First, the ILECs use many of the same facilities and systems to provide both broadband and narrowband, including most notably the local loops: Both voice service and DSL reach the consumer over the same copper wires. This is important because the barriers to

⁶⁴ *Id.* ¶ 33.

effective local service competition are the same as the barriers to effective DSL competition: The competitive carriers must rely on the incumbents for essential inputs.

80. Second, regardless of how the Commission defines the relevant markets, the fact remains that millions of Americans regard narrowband Internet access as a close substitute to broadband, and will choose based on the trade-off between a higher price and higher speed. As I discuss below, consumers appear to be very sensitive to the price of broadband services.

81. Third, from the ILECs' perspective, broadband and narrowband services are inextricably linked. The adoption of broadband by an ILEC's customers – whether the customer chooses DSL, cable modem or some other modality – comes at the expense of voice access lines. The reason is simple: many consumers obtain an additional telephone line primarily for dial-up Internet access, which can be eliminated if the customer subscribes to a broadband service.⁶⁵ Indeed, among households with more than one computer, broadband has an even greater potential to displace access lines: “because multiple computers can utilize one broadband connection, the need for additional lines is further reduced as home networking gains popularity.”⁶⁶

82. This displacement effect has a huge impact on the ILECs. It has been estimated that over one-fourth of American households have more than one telephone line, and that most of

⁶⁵ See, e.g., *IDC Packet/Cell-Based Report* at 32 (“with DSL and cable modems, there is less of a demand for second phone lines”); Morgan Stanley, *Residential Broadband Update, Broadband Cable Television*, 32 (Dec. 28, 2001) (“much of the broadband migration from dial-up access is in fact replacement spending”) (“*Morgan Stanley Report*”); *Forrester January 2002 Report*, 1 (noting that second-line growth has declined because of consumer adoption of broadband).

⁶⁶ *IDC Packet/Cell-Based Report* at 31.

these extra lines are used for narrowband Internet access.⁶⁷ According to a survey conducted by Gartner Dataquest, during the first half of 2001, about 3% of U.S. households replaced a traditional telephone access line with broadband. Gartner estimates that in just six months, nearly 4 million access lines were displaced by broadband.⁶⁸ This is more than the *total* number of DSL lines (3.6 million) that all of the RBOCs had at the end of 2001.⁶⁹ As recently noted by Dr. Robert Pepper, chief of the office of Plans and Policy, this “ripple effect” is having an impact on ILEC profits.⁷⁰

83. A model can illustrate this phenomenon. Let β represent the percentage of consumers who regard an additional POTS line as a substitute for broadband. For illustrative purposes, let us assume that β is 35%. (As we will see in a moment, this percentage is consistent with available data.) This means that for each 100 customers in SBC’s service territory who adopt broadband, SBC will lose 35 access lines. According to Crandall and Sidak, SBC has about a 32% broadband share, so assume it will sell DSL to about 32 of the 100 customers

⁶⁷ Stephens, Inc., *Ringtones: DSL Part II: No Quick Fixes in the Residential Market, Part I* (Oct. 8, 2001) (“*Stephens Report*”).

⁶⁸ Gartner, Inc., *U.S. Residential Wireline Voice Access Lines Head South, Revenues Head North* (Aug. 31, 2001). This report is not publicly available, but the results are summarized in Jay Wrolstad, *U.S. Consumers Migrating Toward Broadband, Wireless*, Wireless NewsFactor (Sept. 19, 2001), available at <http://www.wirelessnewsfactor.com/perl/story/?id=13619>. Gartner found during the first six months of 2001, some 6% of U.S. households replaced a traditional access line with alternative communications equipment. Of these, 55% (i.e., 3% of U.S. households) replaced the access lines with broadband service.

⁶⁹ In their year-end earnings reports, the RBOCs reported the following numbers of DSL lines: Verizon 1.2 million; BellSouth 620,500; SBC 1.3 million; Qwest 448,000. News Release, *Verizon Communications Reports Solid Results for Fourth Quarter, Provides Outlook for 2002* (Jan. 31, 2002); News Release, *BellSouth Reports Fourth Quarter Earnings* (Jan. 22, 2002); News Release, *SBC Reports Fourth-Quarter Earnings* (Jan. 24, 2002); News Release, *Qwest Communications Reports Fourth Quarter, Year-End 2001 Results* (Jan. 29, 2002).

⁷⁰ Communications Daily (Feb. 21, 2002).

adopting broadband. Thus, in this illustration, SBC gains 32 DSL customers but loses 35 access lines.

84. In theory, this trade-off would be beneficial for the RBOCs if DSL service were more profitable than access lines. But it has been reported by analysts that “dialup is a far more profitable business” than broadband for the ILECs.⁷¹ As one pointed out:

Residential second lines are a financial bonanza for local phone companies. Most homes are already wired for additional connections, which makes turning on new service as simple and cheap as typing a few keystrokes. Incremental profit margins often exceed 70%.⁷²

85. Accordingly, the displacement effect therefore may have a profound impact on the RBOCs’ bottom line: *Increasing broadband demand may well reduce RBOC profits.*

86. There is yet another reason why it makes no sense to exempt DSL from the regulatory requirements applicable to voice services: The Commission should take into account the emerging trend toward the bundling of DSL and voice services. Some carriers already offer bundled packages that include both local phone service plus DSL, and these packages are likely to become even more common in the future.⁷³ As The Yankee Group has pointed out, “[p]roviders are using bundles to expand control over the communications value chain and

⁷¹ Eric Krafp, *Access Services Roll Ahead – Slowly*, Business Communications Review, 51 (Jan. 1, 2002).

⁷² *Stephens Report*.

⁷³ For example, Qwest is already offering a “Connected Home” bundle that includes DSL, a residential phone line and 20 popular calling features (such as Caller ID) for \$72.90 a month. Raymond James, *Qwest Communications Intl.*, 20 (Dec. 10, 2001) (“*James Qwest Report*”). Analysts predict that such bundling will become increasingly popular. See, e.g., Forrester Research, Inc., *Broadband Opens the Door for Bundles* (March 30, 2001).

capture share of the higher value customers.”⁷⁴ Within the industry, it is widely believed that a bundled package is “a ‘stickier’ offering that is likely to remain in place in the face of competition.”⁷⁵ Qwest’s studies have shown that a bundle including DSL reduces churn by a factor of four.⁷⁶

87. CLECs need to have the same ability to offer bundles of voice and DSL over the same line. Indeed, for a CLEC, such a bundled offering may hold out the best (and perhaps the only) hope of profitability. Given the high cost of using ILEC bottleneck facilities, local entry may not be viable *at all* unless entrants have the same ability as the incumbents to offer voice and data over a single line. The Commission correctly pointed out that “lack of access to the high frequency portion of the local loop would materially raise competitive LECs’ cost of providing DSL-based service to residential and small business users, delaying broad facilities-based market entry, and materially limiting the scope and quality of competitors’ service offerings.”⁷⁷ Analysts have made the same point:

DSL carriers must have the ability to bundle services to offer the cost-cutting advantages of having all products – data, voice, and Internet access – over a single copper line. A carrier’s success will ultimately be determined by its ability to deliver local, long distance, and Internet access over the same pipe.⁷⁸

⁷⁴ The Yankee Group, *Assessing the U.S. Residential Communications Landscape: New Strategies, New Opportunities*, 3 (Nov. 14, 2001).

⁷⁵ *James Qwest Report*, 20.

⁷⁶ Dresdner Kleinwort Wassestein Research, *Qwest Communications*, 30 (Nov. 12, 2001).

⁷⁷ *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Third Report & Order, 14 FCC Rcd. 20912, ¶ 25 (1999).

⁷⁸ Goldman Sachs Investment Research Report, *The Race to Build the Broadband Kingdom*, 26 (Aug. 12, 1999) (“*Goldman Sachs Report*”).

B. The Market Power Of The ILECs As Providers Of Mass-Market Broadband Services

1. Market Power In Areas Lacking Substantial Intermodal Competition

88. Even if one were to conclude that ILECs lack market power in areas where they face competition from cable modem service, that would not justify SBC's request that it be declared non-dominant *everywhere*. Some limited and scattered areas of the country do not have cable television service at all. In many other areas, cable TV is available but the infrastructure has not been upgraded to permit cable modem service. As the Commission recently pointed out, "cable systems capable of providing cable modem service tend to be located in more densely populated areas, especially in the East, the Midwest, and on the West Coast."⁷⁹ A customer in Philadelphia cannot obtain service from a carrier in Atlanta, and the Commission cannot assume that all localities are alike. For example, although DSL subscriptions lag well behind cable modem subscriptions in most areas of the country, DSL is actually ahead in California and Missouri.⁸⁰ Moreover, 20% of the zip codes in the United States have only one prominent broadband provider.⁸¹ The people living in these areas do not enjoy any intermodal competition – between DSL and cable modem services.

89. SBC has not provided any disaggregated cable/DSL data, and thus has made no showing whatsoever that it lacks market power in any particular area. Moreover, Crandall and Sidak have made no attempt to demonstrate that the other emerging broadband technologies

⁷⁹ *Third Section 706 Report ¶ 46.*

⁸⁰ *Id.* Table 7.

⁸¹ *Id.* Table 9.

(such as satellite and wireless) are themselves sufficient to constrain the ILECs where they do not face cable modem competition.

2. Market Power over Business Customers

90. The ILECs face little competition at all from cable in the business arena. As the president of Broadband Intelligence pointed out, “cable doesn’t really compete in the small business market. It’s really DSL’s game to win or lose.”⁸² And an AT&T Broadband executive, speaking on a panel at the Comnet conference, stated that AT&T Broadband’s cable plant was strictly a vehicle for delivery to the residential market.⁸³ The simple fact is that cable systems generally do not serve business districts.

91. Although the CLECs have concentrated their DSL efforts on business rather than residential customers, the ILECs nevertheless have a very large share. According to the most recent data from Telechoice, the ILECs provide 66% of the DSL lines used by businesses, as shown below:

DSL Lines in Service (3rd Quarter 2001)⁸⁴

<u>Provider</u>	<u>Lines in Service</u>	<u>% Business</u>	<u>Business Lines</u>	<u>Share of Business DSL</u>
ILECs	3,254,225	20%	650,845	66%
CLECs	539,415	58%	312,860	32%
IXCs	28,000	85%	23,800	2%

⁸² *Cable Modems Retain Lead But DSL is Growing Faster*, Communications Daily (Aug. 2, 2000).

⁸³ *AT&T Says Its Cable Plant Doesn’t Extend to Business Setting*, Communications Daily (Jan. 31, 2002).

⁸⁴ TeleChoice DSL Survey, http://www.xdsl.com/content/resources/deployment_info.asp. These figures may understate the RBOCs’ share of business lines because home office customers often purchase the residential products instead of the business-class products. *Id.*

92. Moreover, as explained more fully below, many of the CLECs offering DSL service have recently been fading from the scene, and pose even less of a competitive constraint on the ILECs. “Competition for DSL subscribers in the telecom market is non-existent as more CLECs and DLECs become insolvent.”⁸⁵

3. Market Power through the Control of Bottleneck Facilities

93. Even though the Commission has found that providers of broadband services face “competitive conditions,” it has also consistently found that, absent regulation, the incumbent LECs would retain the ability to use their bottleneck control over the facilities needed for voice and DSL services to impede competition in both areas:

[T]he loop connecting a subscriber to the incumbent’s central office is a key bottleneck facility that can be used either for circuit-switched voice telephony or for the xDSL-based services at issue here. Imposing the service specific limitations . . . on a competitor’s access to such facilities would allow incumbents, contrary to the central purpose of the 1996 Act, to leverage their ownership of bottleneck assets to continue exercising monopolistic control of telecommunications markets.⁸⁶

94. The ILECs clearly have the ability and incentive to exercise market power against competitive DSL providers. The CLECs must rely on the incumbents not only for loops, but also for collocation, provisioning and maintenance. In addition, they need a pre-qualification tool, so they can tell a prospective customer (as quickly as the ILEC can) whether the customer qualifies for DSL service. The ability and incentive of the incumbents to discriminate against competitive

⁸⁵ RHK, Inc., *Broadband Access: North America*, p. 1 (Dec. 2001) (“*RHK Broadband Access Report*”).

⁸⁶ *FCC WorldCom Brief* at 16; *see also id.* at 22-24.

DSL providers in furnishing these necessary inputs are obviously not constrained by the fact that the ILECs face competition from cable modem service.

95. Stripped to its essence, the RBOCs' position is that anticompetitive conduct directed at the CLECs does not really affect consumers because the presence of cable modem service and other broadband technologies will ensure a competitive marketplace. This proposition can be tested by looking at what actually happened with the collapse of competitive DSL providers as a constraint on the ILECs.

96. The last twelve months have seen a steady erosion of the competitive DSL segment. Whereas the CLECs had previously been adding customers at a faster rate than the incumbents, the Commission reported that by mid-2001 the incumbents were growing faster.⁸⁷ The ILECs' share of DSL subscriptions grew from 92% to 93%, while the number of CLEC customers subscribing to DSL actually declined.⁸⁸

97. When the year 2001 began, there were three dedicated DSL carriers (sometimes referred to as "DLECs"⁸⁹) with footprints around the country: NorthPoint Communications, Rhythms NetConnections and Covad. All three of these companies – the biggest DSL competitors to the RBOCs – have now sought Chapter 11 bankruptcy protection.⁹⁰ Moreover, the casualties were not limited to the big players. As the *Wall Street Journal* reported just the

⁸⁷ *Third Section 706 Report* ¶ 51.

⁸⁸ *Id.*

⁸⁹ "DLECs" are local exchange carriers that provide primarily data service. In this paper, when I refer to CLECs, I am also including the DLECs.

⁹⁰ Robert E. Hall and William H. Lehr, *Rescuing Competition to Stimulate Telecom Growth*, 21 (Sept. 28, 2001) (available at <http://www.sandhillecon.com>) ("*Hall/Lehr Sept. 2001 Report*"); Tom Mainelli, *DSL Service Falters as Providers Crumble*, PCWorld.com (Aug. 15, 2001) (available at <http://www.pcworld.com/resource/printable/article/0,aid,58344,00.asp>).

other day, “[s]cores of companies that were formed in recent years to take on the Bells have stumbled badly, and dozens are in bankruptcy proceedings or have shut down.”⁹¹ Further, as the Commission recently pointed out, analysts “conclude that the current contraction of the competitive LEC market, [for DSL] in particular, will likely continue in the near term.”⁹²

98. The collapse of the CLECs is certainly bad for customers desiring broadband. There is, as analysts have noted, a “lack of competition in the DSL market because of the demise of the DLECs and many of their ISP partners.”⁹³ Commenting on the demise of the competitive DSL providers, Professors Hall and Lehr point out:

As a result, the Bell share of DSL lines in service continues to grow. And unsurprisingly, the Bells have raised their retail DSL prices, in some cases more than doubling them, apparently now safe from the fear that they would be disciplined by competition.⁹⁴

99. During 2001, the growth in DSL subscriptions was a good deal lower than many had predicted, and it is widely believed that “the lack of meaningful competition from the CLECs ... will provide little impetus for the ILECs to drive DSL expansion at a faster rate.”⁹⁵ These views are commonly held by industry analysts:

⁹¹ Shawn Young, Yochi Dreazen and Rebecca Blumenstein, *How Effort to Open Local Phone Markets Helped the Baby Bells*, Wall Street Journal, A1 (Feb. 11, 2002) (“Young Article”).

⁹² *Third Section 706 Report* ¶ 62.

⁹³ IDC, *U.S. Cable Modem Market Share by Operator, 3Q01* (Nov. 2001).

⁹⁴ *Hall/Lehr Sept. 2001 Report*, 21.

⁹⁵ RHK, Inc., *Access Network Systems: North America – DSL*, 1 (Aug. 2001) (“RHK Access Network Report”).

[T]he first half of this year witnessed a major shakeout among DSL wholesalers and independent ISPs. In its wake came a reversal of last year's downward pricing pressure.⁹⁶

Competition for DSL subscribers in the telecom market is non-existent as more CLECs and DLECs become insolvent.⁹⁷

Without competition, the RBOCs have reverted to their old monopolistic ways since there's no incentive driving faster DSL competition.⁹⁸

Now that upstart competitors, such as defunct NorthPoint Communications, no longer threaten the ILECs, the race for DSL subscribers has slowed... The ILECs now dominate the US DSL market, and with a dearth of competition, the ILECs no longer have an incentive to aggressively market and deploy DSL service.⁹⁹

Perhaps most importantly, the fall of the competitive local exchange carriers (CLECs) has given the ILECs room to retire to 'Bell Standard Time' after years of trying to move in sync with 'Internet Time'. The result has been lower than expected DSL rollout rates in the US. In contrast, the worldwide ADSL sky has not fallen. Deployment has gone much more smoothly in several regions such as South Korea, Japan, and most of Europe.¹⁰⁰

100. Thus, the prevailing view among industry analysts is that the DSL prices charged by ILECs would be lower if the CLECs had a larger presence. If true, this suggests that the ILECs *do* have market power as providers of broadband Internet-access service, and that their market power is not sufficiently constrained by intermodal competition from cable modem

⁹⁶ Broadband Intelligence, Inc., *Competitive Analysis of DSL and Cable Modems: Quarterly Report Analysis – Q3 2001* (2001) ("Broadband Intelligence Report").

⁹⁷ RHK *Broadband Access Report*, 1.

⁹⁸ RHK *Access Network Report*.

⁹⁹ IDC, *US DSL Market Shares by Vendor, 1H01* (Aug. 2001).

¹⁰⁰ Salomon Smith Barney, *Communications Components*, 2 (Nov. 23, 2001).

service and other technologies. For consumers, the consequences of a dormant CLEC sector has been higher prices and reduced choice.

101. Furthermore, the collapse of the competitive DSL sector is also bad news for consumers desiring local telephone choice. Because the price of network elements is so high in most areas, entry into the local telephone markets often cannot be justified based on voice revenues alone. Impeding DSL competition can deter local voice entry that would otherwise occur.¹⁰¹ Thus, even if the Commission has some doubt about whether the ILECs possess market power in the broadband arena where they face intermodal competition, that should not be the end of the inquiry. If the ILECs are not subject to dominant-carrier regulatory requirements in their provision of DSL, anticompetitive conduct directed at other DSL carriers will probably spill over into the traditional voice markets.

4. SBC's Exercise of Market Power in Raising DSL Prices by 25%

102. Market power is the ability profitably to raise and sustain prices above the competitive level. Crandall and Sidak assure the Commission, based on their "econometric analysis and customer level churn data," that "SBC could not profitably increase prices" for DSL.¹⁰²

¹⁰¹ See *Goldman Sachs Report*, 26 ("A carrier's success will ultimately be determined by its ability to deliver local, long distance, and Internet access over the same pipe."); cf. *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Third Report & Order, 14 FCC Rcd. 20912, ¶ 25 (1999) (explaining that the "lack of access to the high frequency portion of the local loop would materially raise competitive LECs' cost of providing sDSL-based service to residential and small business users, delaying broad facilities-based market entry, and materially limiting the scope and quality of competitors' service offerings.").

¹⁰² Crandall-Sidak Decl. ¶ 51.

103. Crandall and Sidak included no consideration in their filing to the Commission that SBC *did* initiate an industry-wide price increase in 2001. Crandall and Sidak neglected both to mention and to provide an economic explanation for SBC's recent 25% increase in DSL prices. This omission particularly stands out in the context of their references to price increases by other carriers.¹⁰³

104. When the year 2001 began, DSL and cable modem service were typically priced at the same level,¹⁰⁴ with the most common price being \$39.95 per month.¹⁰⁵ Then in February 2001, SBC raised its DSL price by 25%, from \$39.95 to \$49.95.¹⁰⁶ In succeeding months, this price increase was widely followed by other DSL providers – notwithstanding the prediction by some analysts that competition from cable companies would keep the other RBOCs from raising their prices.¹⁰⁷ In May 2001, both Verizon and BellSouth followed suit, raising their DSL prices from \$39.95 to \$49.95.¹⁰⁸

¹⁰³ *Id.* ¶ 38.

¹⁰⁴ All of the prices discussed in this section include both the high-speed connection as well as access to an Internet Service Provider. This is how both DSL and cable modem service are usually marketed.

¹⁰⁵ *SBC dominates DSL market as others struggle*, San Francisco Chronicle (June 13, 2001) (“*SF Chron. SBC Article*”); *Broadband Intelligence Report*.

¹⁰⁶ *Id.*; Teledotcom, *SBC's Coast Is Clear for DSL Rate Hikes* (Mar. 5, 2001) (available at <http://www.teledotcom.com.com/article/TEL20010301S0009>) (“*Teledotcom SBC Article*”); *SF Chron. SBC Article*.

¹⁰⁷ After SBC raised its prices, an analyst at TeleChoice stated “that strong competition from cable operators Comcast Corp. (Philadelphia), AOL Time Warner Inc. and AT&T should keep Verizon Communications from charging more than \$39.95 for DSL.” *Teledotcom SBC Article*.

¹⁰⁸ Crandall-Sidak ¶ 38; Evan Blackwell, “Will What Goes Up Come Back Down?” *Broadband Week*, (May 21, 2001) (available at http://www.broadbandweek.com/news/010521/print/010521_biz_price.htm).

105. The DSL price increases were *not* generally matched by the cable companies. “Though some MSOs have raised monthly subscription rates, in general, cable modem service is less expensive than DSL, ranging in price from \$39.95 to \$45.95 per month.”¹⁰⁹ An October 2001 survey found that the average monthly fee for cable modem service was \$44.¹¹⁰ Another analyst reported in December 2001 that the average price of cable broadband was \$44.22 while the average price of DSL broadband was \$51.67.¹¹¹ Thus, the parity of pricing between cable and DSL, which had prevailed when 2001 began, was no longer present by the second half of the year. As Broadband Intelligence reported:

The emerging pricing scheme positions cable modem prices at least several dollars below ILEC DSL rates. This contrasts with the pricing parity of last year [2000], which followed a wave of price cuts and promotions by ILECs seeking to become more competitive with cable and the aggressively-priced DSL services available last year from share-hungry independent providers.¹¹²

106. Any assessment of whether SBC has market power must confront these facts. Even though SBC’s share of broadband was far smaller than that of the cable companies – Crandall and Sidak estimate SBC’s share at 32%¹¹³ – it was able to initiate a large price increase

¹⁰⁹ The Yankee Group, *Cable Modem Providers Continue to Lead the High-Speed Internet Charge: The Yankee Group’s Predictions on Consumer Broadband Services*, 4 (Aug. 2001).

¹¹⁰ Cahners In-Stat Group, *Despite Service Pratfalls, Cable Modem Subscriber Growth Remains Robust*, 4 (Dec. 2001).

¹¹¹ Shelley Emling, *Tech Industry Pushes Government to Push Broadband*, NewsFactor Network, Feb. 7, 2007 (citing information provided by Market Kersey of ARS Inc.) (available at <http://www.newsfactor.com/perl/story/?id=16211>).

¹¹² *Competitive Analysis of DSL and Cable Modems: Quarterly Report Analysis – Q3 2001* (2001)

¹¹³ Crandall-Sidek Decl. ¶ 18.

and charge more than the cable companies. Crandall and Sidak do not analyze this SBC-initiated price increase; they simply say that prices could not profitably be raised.

107. The pricing of DSL in this country should be compared to the situation elsewhere. British Telecom just announced that it would cut its broadband price from \$35 to \$21.¹¹⁴ Bell Canada charges \$25.50 (U.S.) for a 1-Mbps download connection.¹¹⁵ Compared to the rates in this country, the Canadian price is much lower and, not surprisingly, the broadband penetration rate is nearly double that of the United States.¹¹⁶ In Asia, DSL prices fell dramatically from \$40 to \$17 during the same period in which DSL prices in this country were rising from \$40 to \$50 per month.¹¹⁷ These lower prices have resulted in much higher use. During the year 2001, the number of DSL lines in Japan increased from less than 10,000 to 1.5 million, an increase that “was mainly driven by falling prices.”¹¹⁸ In South Korea, 95% of home Internet users have broadband connections; the rate in Hong Kong is 53% and in Taiwan 35%.¹¹⁹

108. The high price that SBC charges for DSL also helps explain why its share is lagging behind that of its cable modem competitors. Once again, the international comparison is revealing. Among OECD countries as a whole, at the end of 1999 the relative shares of cable

¹¹⁴ Communications Daily (Feb. 27, 2002).

¹¹⁵ Todd Spangler, *Crossing the Broadband Divide*, PC Magazine, 97 (Feb. 12, 2002).

¹¹⁶ *Third Section 706 Report* ¶ 126 (finding a broadband penetration rate of 6.22% in Canada and 3.24% in the United States; citing Organization for Economic Co-operation and Development, *The Development of Broadband Access in OECD Countries*, Oct. 29, 2001 (“OECD Report”)).

¹¹⁷ Cahners In-Stat Group, *U.S. Residential DSL Continues to Grow Despite Market Turmoil*, 25 (Oct. 2001).

¹¹⁸ Newsbytes Asia, *Broadband Subscriptions Soar in Japan* (Jan. 18, 2002) (available at http://www.nua.ie/surveys/index.cgi?f=VS&art_id=905357571&rel=true).

¹¹⁹ Nielsen NetRatings, *Broadband nears saturation in South Korea* (Sept. 27, 2001) (available at http://www.nua.ie/surveys/index.cgi?f=VS&art_id=905357235&rel=true).

modems and DSL were 84% and 16%. Thus, DSL was even farther behind cable than was the case in the United States, where DSL's relative share was 26%. But DSL quickly caught up in the OECD countries as a whole, achieving a relative share of 49% by June 2001.¹²⁰ Not so in the United States, where cable modem service continues to outpace DSL by a ratio of two to one.¹²¹

109. The consequences of SBC's price increase were predictable: Just as falling DSL prices abroad have led to sharp increases in demand, rising prices here have dampened demand. Crandall and Sidak cite a study conducted by Professors Rappaport *et al.* in 2000, which concluded that every 1% increase in DSL prices leads to a decrease in demand of about 1.5%.¹²²

110. SBC in fact suffered a huge number of DSL cancellations after it raised prices. According to Crandall and Sidak, during the first seven months of 2001, SBC's churn rate for DSL was 5.7% *per month*.¹²³ This is a stunningly high churn rate. It means that over the course of those seven months, SBC lost 33% of its DSL customers. At that rate, SBC would lose 50% of its customers in a year. Note that this is a loss of *existing* customers. Also, undoubtedly, there were customers who *would* have signed up for DSL at \$39.95 but were unwilling to do so at \$49.95.

111. Crandall and Sidak claim that this high level of demand elasticity implies that SBC lacks market power. But they ignore a crucial question: What happened to SBC's lost DSL

¹²⁰ *OECD Report* at 5, 13.

¹²¹ *Third Section 706 Report* Table 3 (showing that in June 2001, there were 2,490,740 ADSL lines and 4,998,540 cable lines serving residential and small business customers).

¹²² Crandall-Sidak Decl. ¶ 68 (citing Paul Rappaport, *et al.*, *Residential Demand for Access to the Internet*, 19 (Univ. of Ariz. Working Paper, Spring 2001) ("*Rappaport Study*"). Crandall and Sidak "updated" this study using more recent data from late 2000 and early 2001. They concluded that a 1% increase in DSL prices would reduce demand by 1.2%. *Id.* ¶ 66.

¹²³ *Id.*

customers? According to the Rappaport study of cross elasticity, it is likely some of these customers switched to cable, and it is likely some of them returned to narrowband dial-up access.¹²⁴

112. Why was it profitable for SBC to raise prices by 25% despite losing a substantial percentage of its DSL customers? Because SBC did not in fact “lose” all those customers. Many of them likely substituted to an additional access line for their service. This is the flip side of the example I discussed above, where the effect of 100 SBC customers adopting broadband was to increase DSL subscriptions by 32 and decrease access lines by 35. If the demand for broadband diminishes (or grows less rapidly), then for every 100 customers who dropped broadband service (or who chose not to subscribe to broadband in the first place), SBC would lose 32 DSL customers but it would gain 35 access lines.

113. In sum, SBC’s pricing behavior is consistent with significant market power. The same conclusion would certainly apply to Verizon and BellSouth. Like SBC, they raised their DSL prices by 25% to a level significantly above the prices then generally being charged by cable companies for their broadband service.

C. Market Definition

114. This section demonstrates that broadband and narrowband Internet-access are in the same relevant market, although I do not believe that the Commission needs to resolve this question to determine the regulatory requirements appropriate for the incumbents’ DSL services. This conclusion is consistent with the RBOCs’ behavior in raising DSL prices and with the econometric evidence relied upon by Crandall and Sidak.

¹²⁴ See the discussion of the Rappaport study, *infra*, at note 135 and accompanying text.

1. Analytic Framework

115. Relevant markets are typically defined to facilitate the assessment of whether a particular firm possesses market power with respect to one or more of its products and also to facilitate the identification of the significant sources of competition that limit any such power. Market power is the ability profitably to maintain prices above competitive levels or profitably to reduce product quality, service, or innovation below competitive levels for a significant period of time.

116. Done properly, market definition can be a useful tool for the process of diagnosing whether a firm likely possesses market power. It can allow us to identify and analyze those products and suppliers that place significant competitive constraints on the behavior of the firm. A properly defined product market should include all those products that are significant demand substitutes for the product in question. One product is a demand substitute for another if an increase in the price of the second causes consumers to use more of the first product instead. For example, cable access is a demand substitute for DSL access because an increase in the price of DSL access causes consumers to purchase more cable access rather than DSL.

117. The presence of significant demand substitutes for a firm's product constrains the price it charges for its product, and therefore its ability to exercise market power. For example, if an increase in the price of DSL would be unprofitable because so many consumers would switch to other Internet-access services provided by different carriers, then the seller of DSL would be constrained in its ability to increase price. A properly defined market should take into account the tendency of consumers to substitute to other products in response to an increase in price.

118. One conceptual framework used to define markets is the hypothetical monopolist test. This test, as articulated in the United States Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, indicates that markets are defined to include the smallest set of products such that a hypothetical monopolist over this set of products could profitably impose a small but significant and non-transitory increase in price.¹²⁵ This test is generally applied under the assumption that the products under investigation are offered by profit-maximizing firms not subject to direct price or service regulation.

119. Markets are not properly defined just by identifying the single closest substitute or source of competition for the product or firm in question. Even in markets where products are highly differentiated, the hypothetical monopolist test properly mandates the consideration of the extent of competition offered by a range of products and firms. If there were a hypothetical monopolist in the supply of a single product plus its closest rival products, but that monopolist could not profitably raise price to a significant degree due to the existence of other more distant competitors or products, then the relevant market must be expanded. The market must be expanded to include those other products that, we have learned from the hypothetical monopolist test, provide significant competition for the single product and its closest rivals.

120. I have long believed that broadband and narrowband Internet access are likely in the same relevant market. I realize that in the recent *AOL Time Warner* proceeding, the Commission decided to treat "high-speed Internet access services" as the relevant product market for purposes of "determining the effects of the proposed merger on the public interest."¹²⁶ The

¹²⁵ Department of Justice, Federal Trade Commission, Antitrust Division, 1992 Horizontal Merger Guidelines, 57 Fed.Reg. 41552, 41556 § 1.21

¹²⁶ *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations by Time Warner, Inc. and America Online, Inc., Transferors, to AOL Time*
(continued . . .)

Commission, however, was careful to point out that “the record in this proceeding does not reflect much debate over this question.”¹²⁷ Moreover, the Commission emphasized that its “finding in this proceeding that residential high-speed Internet access services constitutes a product market distinct from narrowband services will not restrict the Commission’s ability to consider market definition questions that arise in the context of ... any other future Commission proceeding.”¹²⁸

121. When the Commission defined the relevant market in *AOL Time Warner*, it employed an antitrust test. That is the correct test to use when evaluating a merger. Here, the purpose is different: to determine the appropriate regulatory requirements for an ILEC “that is dominant in the provision of traditional local exchange and exchange asset services.”¹²⁹ In addition, the circumstances are different from those presented in *AOL Time Warner*: the ILECs are appropriately subject to direct price and service regulation that likely constrain alternatives for both consumers and producers. In the past, others (including the Department of Justice and SBC) have told the Commission that market definitions used for antitrust purposes are not necessarily appropriate for regulatory purposes for just these reasons.¹³⁰ As I explain below,

(... continued)

Warner, Inc., Mem. Opinion & Order, 16 FCC Rcd. 6547, ¶ 69 (2001) (“*AOL-Time Warner Merger Order*”).

¹²⁷ *Id.* ¶ 69 n.201.

¹²⁸ *Id.* ¶ 69 n.202.

¹²⁹ Notice ¶ 1.

¹³⁰ As the Commission noted, “DOJ urges the Commission to be mindful of the different objectives of defining markets for purposes of regulation and antitrust enforcement.” *LEC Classification Order* ¶ 23. See also *id.* ¶ 20 (“SBC claims that the 1992 Merger Guidelines were never intended to serve as a basis for determining whether or how to regulate a market”).

regulation of the broadband services provided by the ILECs are needed to guard against anti-competitive conduct in the related markets that the ILECs dominate and to foster competition in the local telephony markets.

122. Although I will explain below why broadband and narrowband access services should be regarded as part of the same relevant market for present purposes, I reiterate that I do not believe it is essential for the Commission to define the relevant markets precisely in order to fashion appropriate broadband regulations.

2. The Product Market Includes both Broadband and Narrowband

123. The Commission states in the *Notice* that “our goal is to rigorously define the relevant markets so as to include all reasonably substitutable services.”¹³¹ Under that standard, broadband and narrowband access are in the same relevant market because there is now, and will continue to be for the foreseeable future, a great deal of demand cross-elasticity and opportunities for substitution between the two modes of Internet access. The overwhelming majority of Internet content is accessible by both narrowband and broadband access; the only difference is the speed or quality of the downloads. Millions of people choose between broadband and narrowband by comparing the prices and benefits of the two services.

124. Consumers appear to be very sensitive to the price of broadband services. For example, Hal Varian of the University of California at Berkeley concluded that, “Users are not willing to pay very much for higher bandwidth for accessing today’s applications.”¹³² Virtually

¹³¹ *Notice* ¶ 18.

¹³² Hal R. Varian, *The Demand for Bandwidth: Evidence from the INDEX Project*, 14-15 (University of Calif., Berkeley, Sept. 2001). See also Austan Goolsbee, *Subsidies, the Value of Broadband, and the Role of Fixed Costs* (presented at the AEI-Brookings Joint Center for Regulatory Studies Conference on Broadband Communications, Oct. 4-5, 2001).

all analysts agree that the extent of broadband use is heavily influenced by the price premium relative to narrowband. For example, consistent with the SBC churn data discussed above, a survey by the Strategis Group found that one-third of online consumers would pay \$25 a month for broadband, but only 12% would pay \$40 a month, and only around 5% would pay \$50.¹³³ A higher broadband price premium not only leads to slower growth in the number of new subscriptions,¹³⁴ but it also results in more cancellations – as SBC’s recent experience demonstrates.

125. Indeed, the very econometric study cited by Crandall and Sidak confirms the high degree of cross-elasticity between broadband and narrowband. The study by Professor Rappaport, *et al.*, found that in areas where consumers could only choose between DSL and dial-up (because cable was not available), there was “a significant cross price effect suggesting ADSL is a strong substitute for dial-up access. The ADSL elasticity is greater than one.” In areas where both forms of broadband were available, “we note that both ADSL service and cable modem service are strong substitutes to dial-up access. We also observe, not surprisingly, that ADSL and cable modems are substitutes for each other.”¹³⁵

126. To be sure, broadband is regarded as a superior service because of its faster speeds and the fact that it is “always on.” But the dial-up alternative has its own advantages. If the customer has a second line for Internet access, that line can be used for voice calls or a fax

¹³³ See Information Technology Association of America, *Building a Positive Competitive Broadband Agenda*, p. 10 (Oct. 2001) (presenting data from Strategis Group) (available at <http://www.positivelybroadband.com>).

¹³⁴ Thomas Bittman, *Dump Broadband Movement Growing*, ZDNet (Nov. 6, 2001) (available at <http://zdnet.com/2100-1105-53108.html>) (“Bittman Article”).

¹³⁵ *Rappaport Study*, 19.

machine. Also, a customer with dial-up service can access the Internet from any telephone; a cable modem or DSL customer, by contrast, only has broadband access from home.

127. Some have argued that broadband and narrowband are in different markets because they support different applications. An article by Sidak (and others) asserts that “the demand for broadband connections was explained ... by a desire to download music, video and games,” whereas “the demand for narrowband is driven by a *completely different set of applications*, including email, research, headline news, entertainment, shopping, chat, general surfing, financial news, sporting news, travel services and banking.”¹³⁶ But these assertions, based on 1999 survey data, are belied by more recent evidence. As the Yankee Group pointed out:

[B]roadband has yet to be defined by users in terms of the applications or services that high-speed access enables. Less than 2% of those surveyed cited listening to music online, watching video, or playing games as either a primary or secondary reason for subscribing to high-speed access services.¹³⁷

128. In fact, broadband subscribers use the Internet for essentially the same purposes as narrowband subscribers.¹³⁸ For most users, broadband differs from dial-up in degree but not

¹³⁶ Jerry A. Hausman, J. Gregory Sidak & Hal J. Singer, *Residential Demand for Broadband Telecommunications and Consumer Access to Unaffiliated Internet Content Providers*, 18 Yale J. on Regulation 129, 138 (2001) (emphasis added).

¹³⁷ Yankee Group Press Release, *Streaming Music, Video Are Not Pulling in Broadband Subscribers, but Offering Secondary Benefit*, Oct. 22, 2001.

¹³⁸ U.S. Dept. of Commerce, *A Nation Online: How Americans Are Expanding Their Use of the Internet*, 41. The report, based on a survey of 137,000 people, concluded that “[t]he only activity reflecting a large difference between broadband users and the Internet-using population, in general, is in the viewing of television or movies or listening to the radio. In September 2001, 28.2 percent of broadband users engaged in these activities, compared to 18.8 percent of Internet users generally.” *Id.*

in kind. That, indeed, is one reason why so many people cancel their broadband subscriptions; “they simply don’t see the need if they’re using the Internet primarily for e-mail, instant messaging and ordering items from online retailers.”¹³⁹

129. It is beyond dispute that for the foreseeable future there will be vigorous competition between broadband and narrowband for the patronage of Internet subscribers. Most analysts believe that several years will pass before even half of Internet subscribers in this country purchase broadband access.¹⁴⁰ The Commission recently estimated that in five years, 55.7% of access connections will be high speed.¹⁴¹ Thus, narrowband will still account for almost half the connections five years from now.

130. Before SBC initiated the recent DSL price increase, the prices of broadband and narrowband were very similar. In fact, when the Commission examined retail prices, it found that the monthly cost of broadband Internet access via cable modem is *exactly the same* as the monthly cost of narrowband Internet access, and the “total first-year costs” were actually lower with the cable modem.¹⁴² Other analysts reached the same conclusion.¹⁴³ Despite the recent

¹³⁹ *Bittman Article*.

¹⁴⁰ See, e.g., Gartner DataQuest, *U.S. Consumer Telecommunications and Online Market, 2001*, 1 (Nov. 8, 2001) (“*Gartner DataQuest Report*”).

¹⁴¹ *Third Section 706 Report* ¶ 63.

¹⁴² *Inquiry Concerning the Deployment of Advanced Communications Capability to All Americans in a Reasonable and Timely Fashion*, Report, 14 FCC Rcd. 2398, ¶ 87 & Chart 3 (1999) (“*First Section 706 Report*”).

¹⁴³ In fact, a Morgan Stanley report found that cable modem service could actually be cheaper. *Morgan Stanley Report*, 32 (“A dial-up AOL subscription plus a second phone line typically totals more than the \$35-40 broadband cable subscription”). Also, it should be noted that a potential pricing advantage that dial-up used to have – the ability to sign-up with a “free” Internet Service Provider – has largely disappeared. “The free, ad-supported Internet service model is all but dead.” Gary H. Arlen, *TR’s Online Census*, 2 (Nov. 2001).

broadband rate increases, the price differences are fairly small. "For consumers who maintain a second phone line for dial-up access to the Internet, the additional cost of moving to broadband is less than \$10."¹⁴⁴ These facts suggest that narrowband pricing is indeed constraining pricing by the cable companies that account for the lion's share of broadband access.

131. The comparability of prices is a consistent indication that broadband and narrowband access are in the same product market. If the prices of these functionally similar products are sufficiently close, then there will likely be a significant pool of marginal customers – customers whose choice between the two products will be influenced by the relative prices. The fact that broadband providers price their services at a level that is comparable to the price of narrowband service – despite the many advantages of broadband – is an indication that the two forms of access are in the same market.

132. In considering the significance of the modest price differences between broadband and narrowband access, one should also bear in mind the price differences *within* the broadband arena. The RBOCs typically offer DSL at several speeds. For example, Verizon's basic service, with a download speed of up to 768 kbps, costs \$49.95 per month. A customer can order service with double that speed for \$79.95 per month.¹⁴⁵ I am not aware of anyone who maintains that the faster DSL connection is in a different product market from the slower DSL connection. Despite the trade-off between price and speed, they are in the same market – just as broadband and narrowband should be treated as part of the same market despite the trade-off between price and speed.

¹⁴⁴ *Forrester January 2002 Report*, 5.

¹⁴⁵ *Verizon Pricing and Packages*, www22.verizon.comforyourhome/dsl/order/LF_vzolproductsprequalify.asp (downloaded Feb. 7, 2002).

133. The high churn rate that SBC experienced after it increased DSL prices provides further evidence that broadband and narrowband are in the same market. When SBC raised its broadband price, a large number of its customers cancelled the service and returned to narrowband. As Crandall and Sidak point out, “in the *AT&T Reclassification Order*, the Commission relied heavily on high churn rates in concluding that long-distance customers had highly price-elastic demand.”¹⁴⁶ Likewise, SBC’s extraordinarily high churn rates – nearly three times the AT&T churn rate cited by the Commission – is powerful evidence of cross-elasticity between broadband and narrowband Internet access.

134. At some point in the future, the broadband and narrowband markets may diverge. On the other hand, there are also signs of convergence. Some analysts believe that a “killer” product in the offing is a 56 kbps *always-on* service, which could be provided at a price of perhaps \$15 per month.¹⁴⁷ This is a narrowband service, but it provides what many consumers regard as the main benefit of today’s broadband services. Millions of consumers use the Internet principally for email, instant messaging, shopping and other such applications. For them, bandwidth may not be much of an issue, but the need to dial-up several times a day (and tie up a phone line) is an annoyance. This new service will further blur the distinction between narrowband and broadband.

135. In their testimony supporting the SBC petition, Crandall and Sidak present econometric evidence to show that DSL is in the same relevant market as cable modem service.¹⁴⁸ But that point is beyond dispute. The more important question – which is not

¹⁴⁶ Crandall-Sidak Decl. ¶ 62.

¹⁴⁷ *Forrester January 2002 Report*, 10.

¹⁴⁸ Crandall-Sidak Decl. ¶¶ 33-39.

addressed in their econometric analysis – is whether narrowband service is *also* in the relevant market. It seems likely that the empirical analysis, properly performed, would find that narrowband Internet access, 95% of which is provided by the ILECs and which is purchased by substantially more customers, is also in the market. That, indeed, is precisely what the Rappaport study shows.

136. If one accepts that broadband and narrowband Internet access are in the same relevant market, there could be no doubt that the ILECs possess market power there. They provide an overwhelming percentage of Internet-access services. I estimate their share to be at least 80% based on data recently reported by the Commission.

- With regard to the narrowband segment, the ILECs' share of residential and small business service was approximately 94.5% at year-end 2000.¹⁴⁹
- In the broadband segment, DSL represented 28% of the residential and small business high-speed lines at mid-year 2001, and the ILECs provided about 93% of those DSL lines.¹⁵⁰ Therefore, the ILEC share of broadband access was about 26%.
- Of the U.S. households with Internet access, narrowband accounts for 80% and broadband for 20%.¹⁵¹ In sum, the ILECs provided about 95% of the 80%-narrowband segment and 26% of the 20%-broadband segment, for an overall Internet access share of *about 81%*.

137. The ILECs' domination of Internet access will not change dramatically in the near term. If broadband subscriptions *doubled* and there were no gains in dial-up, the ILEC share of Internet access would still exceed 70%.

¹⁴⁹ See also *February 2002 Local Competition Release* at 2 (reporting that ILECs provide approximately 94.5% of residential and small business customer lines). Given that the ILECs provided 94.5% of the local telephone service, it is likely that they also provided about that percentage of the dial-up access.

¹⁵⁰ *Third Section 706 Report* ¶¶ 40, 51.

¹⁵¹ *Id.* ¶ 63.

VI. APPROPRIATE SCOPE OF REGULATION

A. The Commission's Goals Are Contrary To The Economic Incentives Of The ILECs.

138. When the Commission determines the appropriate scope of broadband regulation, two policies should be paramount. One is to promote competition among providers. The second is to encourage innovation, deployment and utilization of broadband technologies.

139. In considering what regulatory requirements are appropriate, the Commission should begin by asking whether the ILECs, if freed from regulatory constraints, would advance or retard the Commission's policies. The Commission no doubt recognizes that the first policy is contrary to the economic interests of the ILECs: The incumbents plainly do not want competition. Despite promises and penalties, they continue to impede efforts to pry open their local markets. The *Wall Street Journal* reported that "SBC has racked up \$188 million in penalties since 1999 for failing to meet competition and service requirements."¹⁵² All told, in the six years since the passage of the Telecommunications Act of 1996, it has been reported that the four RBOCs have incurred \$1.84 billion in announced fines, judgments and settlements.¹⁵³

140. The Commission should also recognize that its second goal – stimulating broadband growth – may also be contrary to the economic interests of the incumbents. Although an increase in demand for broadband is unambiguously good for cable companies (as well as for satellite and fixed wireless broadband providers), that may not be true of the ILECs. The

¹⁵² *Young Article*, A14.

¹⁵³ Voices for Choices, *Telecom Act Anniversary Announcement: 'Voices' Coalition Unveils Database of Bell Company Sanctions* (Jan. 7, 2002) (available at <http://www.voicesforchoices.org/1091/wrapper.jsp?PID=1091-25&CID=1091-020702A>).

inescapable fact is that increased broadband demand cannibalizes the highly-profitable local service business they dominate.

141. The behavior of the RBOCs suggests that their investments in DSL are motivated less by a desire for broadband revenues than by the fear of losing voice revenues. I understand that it would have been technologically possible for the RBOCs to deploy broadband services years ago. “Although ILECs have possessed DSL technology since the 1980s, they did not offer the services, for concern that it would negatively impact their other lines of business.”¹⁵⁴ It was not until the cable companies began offering broadband services that the incumbent providers made any serious attempt to deploy and promote these services. As the Commission recently observed, “the expansion of DSL in the past two years by incumbent LECs ‘is primarily a reaction to other companies’ entry into broadband.’”¹⁵⁵ An analyst put the matter more bluntly:

The cable industry began deploying cable modem service in 1996 versus 1999 for the RBOCs and DSL. While DSL technology has been available for many years, it was never offered to customers for fear it would cannibalize existing revenue streams for the RBOCs.¹⁵⁶

142. This view of ILEC incentives is also supported by their pricing behavior. During 1999 and 2000, the major ILECs all launched large DSL deployment initiatives, and generally lowered their prices to match cable modem rates. Then, when it became apparent that their DSL service could not immediately match cable’s broadband share in head-to-head competition (*i.e.*,

¹⁵⁴ FCC Cable Services Bureau, *Broadband Today*, 27 (Oct. 1999).

¹⁵⁵ *AOL-Time Warner Merger Order* ¶ 113 (quoting *UNE Remand Order* ¶ 325 n. 642).

¹⁵⁶ Richard Bilotti, Morgan Stanley, *Telecom – Cable: Residential Broadband Update* (Oct. 15, 2001).

in areas where both cable modem service and DSL were available), the ILECs decided to raise DSL prices despite the predictably large impact on the demand for broadband.

143. The behavior of the RBOCs toward competitive DSL carriers is further evidence that the RBOCs are not acting to maximize broadband profits but instead to protect their local monopolies. If their goal were simply to maximize broadband profits, they ought to embrace the competitive DSL providers. When a competitive carrier makes a sale, the RBOC receives a portion of the revenues – often a very large portion – because of the inputs it provides. On the other hand, the RBOC receives nothing when a consumer selects cable modem service. Given that about two-thirds of the broadband consumers are choosing cable, one might expect the RBOCs to welcome and support the CLECs, whose sales provide them with revenues that would otherwise be lost altogether if the customer chose cable. Plainly the RBOCs do *not* welcome or (voluntarily) support these carriers, for the RBOCs recognize (correctly) that the CLECs threaten their local service monopolies.

B. The Commission's Regulation Of Broadband Has Stimulated, Not Restrained, Innovation And Deployment

144. What is most striking about SBC's submissions is the utter failure to present any hard evidence that the existing regulations of broadband services have resulted in significant costs or burdens. For example, how has the obligation to file tariffs hurt SBC? How has the separate-subsidary arrangement (which SBC agreed to as a condition to approval of the Ameritech merger) imposed a burden? SBC does not say.

145. I would view with great skepticism any claims that SBC has slowed its deployment of DSL because of regulatory burdens. SBC may profess disappointment that more customers have not subscribed to its broadband service (and be unhappy that such a large

number have cancelled), but it can hardly claim to be surprised at this consequence of its 25% price increase. Other RBOCs, faced with the same regulatory “burdens,” have of late been more successful than SBC in expanding their DSL business. Thus, it is hard to take seriously SBC’s claim that its recent misfortunes are due to government regulations. As one analyst pointed out:

[I]nvestors scoffed last week, when SBC Communications Chairman Edward Whitacre blamed his company’s third-quarter losses on government regulations that blocked SBC from deploying DSL... Whitacre’s complaints obscure the fact that SBC fared worse than other regional Bells – faced with the same regulations – in several key growth areas. Its penetration rate is below that of Verizon Communications and BellSouth; their data revenue grew 28% last quarter, while SBC’s grew just 10%.¹⁵⁷

146. Although I cannot claim to know SBC’s real motive in scaling back its “Project Pronto” program, the company appears to have a history of taking similar steps to pressure regulators. For example, SBC threatened the Illinois Commerce Commission with a slow-down of DSL deployment unless the data line-sharing requirement was dropped.¹⁵⁸ The chairman of the Illinois commission was right when he said: “Saying they’ll withhold DSL from that many people is really concrete evidence that you’re dealing with a textbook monopolist.”¹⁵⁹

147. Indeed, it is noteworthy that SBC’s slowdown of DSL deployment coincides with the collapse of the competitive DSL sector. Thus, if SBC’s action is *not* a political and regulatory ploy, the most likely economic explanation for scaling back its investment in broadband is monopoly power – not the alleged burdens of regulation. This very point was made

¹⁵⁷ Bill Scanlon, *SBC Blames Regs for Hard Times*, eWeek (Oct. 29, 2001) (available at http://www.eweek.com/print_article/0,3668,a%253D17265,00.asp).

¹⁵⁸ *Young Article*, A14.

¹⁵⁹ *Id.*

in a letter that I and several other economists sent to members of the Administration on December 12, 2001:

[A]s is well documented in the literature of economics, *monopolists* do not invest the full amounts required for economic efficiency when they are provided with monopoly returns on their investments. In particular, a monopolist will resist investing in new technology if its introduction will undercut the value of its existing assets. Such is exactly the case in broadband telecommunications. Because the Bells remain monopolists over the last mile facilities that are critical to all local telecommunications services, their embedded copper networks have huge value. Over the years before the 1996 Act, the Bells kept their network modernization investments low, did not undercut their current services and, thus, kept their profits high.

But upon passage of the 1996 Act with its requirement that loops be unbundled, the Bells began to face broadband competition from a host of new competitors—Covad, Northpoint, Rhythms—who invested billions of dollars in the electronic infrastructure that, once added to these loops, allows them to carry broadband services. The Bells countered these and other competitive pressures in two ways. The first was to accelerate their own investments in similar electronics, and the second was to resist providing unbundled broadband-capable loops to competitors and to increase effectively the prices they charged for these loops. This strategy succeeded in thwarting the new competitors. Freed from the threat of competition, the Bells once again cut their rates of investment in new broadband facilities.

* * *

Without strict adherence to the pro-competitive precepts of the Act, further deregulation of the Bells will not induce increased investments from the Bells or from their competitors. This is most obvious in the case of the competitors. Because of the natural monopoly character of most local loops, unless these facilities can be leased by competitors on the same economic terms as the Bells provide them for their own use, competitors will have lessened incentives to invest in the electronic and other systems that would permit them to offer broadband services to customers. But neither would further deregulation induce any increments in investment from the Bells. As both history and economic theory have taught us, deregulating a monopoly without genuine prospects of competition does not induce it to deploy more infrastructure, only

to exploit more severely the infrastructure that it has already in place by limiting its use and raising its price

* * *

When entrants could rely on strict enforcement of the unbundling and pricing precepts of the Act, they invested hugely in advanced telecommunications infrastructures—and, facing this competitive challenge, so did the Bells. But as the Bells grew bolder in resisting the Act's provisions, as regulators slackened their commitment to its enforcement, and as legislative threats to the Act such as H.R. 1542 loomed, competitive investment understandably evaporated. When this occurred, the Bells also scaled back their own investments in broadband.¹⁶⁰

148. The same conclusions about the connection between regulation and investment were reached by the OECD after examining telecommunications policies around the world. The OECD found that regulations designed to pry open local markets have resulted in *increased* investment:

Policies such as unbundling local loops and line sharing are key regulatory tools available to create the right incentives for new investment in broadband access. The evidence indicates that opening access networks, and network elements, to competitive forces *increases investment and the pace of development*.

* * *

Initiatives to open the local loop are viewed by most OECD governments as being *fundamental to promoting a fast roll out of broadband services*. ... To date the major criticism of unbundling or line sharing are that such policies allegedly discourage

¹⁶⁰ Letter from William J. Baumol, B. Douglas Bernheim, Robert E. Hall, William Lehr, John W. Mayo, Janusz A. Ordover, Frederick R. Warren-Boulton and Robert D. Willig to Hon. Donald L. Evans *et al.* (Dec. 12, 2001).

investment in new infrastructure. *No evidence has been forwarded to substantiate such a claim.*¹⁶¹

149. The best way to advance the twin policies of strengthening broadband competition and increasing broadband growth is to promote the CLEC sector. The incumbents will have less of an incentive to deploy DSL and compete for broadband customers so long as they dominate the local service markets. Conversely, a resurgence of activity by competitive DSL providers will have a positive impact on DSL rates. Just as the collapse of many of the competitive carriers allowed SBC and other ILECs to raise DSL prices in 2001, the rejuvenation of that sector would likely result in lower prices.

150. Furthermore, the Commission should not lose sight of the central policy goal of the Telecom Act: bringing true competition to local telephony. The actions that the Commission takes with regard to broadband will surely have an impact on the RBOCs' ability to maintain their local telephone monopolies. Deregulating the broadband sector can only enhance the RBOCs' ability to impede competitive carriers in their attempt to provide DSL service. Moreover, as explained above, if the CLECs cannot successfully offer DSL combined with voice services, they may fail in both markets.

C. Specific Recommendations

151. I understand that this proceeding is not the place to comment on the incumbent LECs' wholesale obligations in providing non-discriminatory cost-based access. However, one area that requires particular attention is ensuring that competitive carriers have the ability to

¹⁶¹ *OECD Report*, pp. 4, 15 (emphasis added); see also Robert E. Hall and William H. Lehr, *Promoting Broadband Investment and Avoiding Monopoly* (Feb. 21, 2001) (explaining why competition is best way to spur broadband deployment).

provide DSL on the same line as voice. As discussed above, the ability may be necessary for entry to be economically feasible.

152. One likely effective measure to promote competitive broadband markets would be to require a structural separation in which the retail arm offering broadband services must pay the same rates as CLECs for the use of the incumbents' bottleneck facilities. While such measures are necessarily imperfect, the Commission already has found structural separation requirements to be useful for preventing cross-subsidization and protecting against monopoly power abuses in a number of contexts.¹⁶² Such requirements would not only help guard against price discrimination and anticompetitive price squeezes, but it would also provide an important check on excessive access charges.

153. Whether or not the Commission takes this step, it should continue to require LECs that are dominant in their local service markets to file tariffs applicable both to DSL and to the larger-business broadband services. The tariffs should be accompanied by cost support in accordance with current rules.

154. **DSL.** By requiring the incumbents to disclose their DSL rates, the Commission will guard against the important dangers of anticompetitive behavior. A tariff-filing requirement

¹⁶² See, e.g., *GTE Midwest, v. FCC* 233 F.3d 341, 348 (6th Cir. 2000) (affirming FCC rules requiring structural separation of LECs' landline and commercial mobile radio services); *Illinois Bell Tel. Co. v. FCC*, 740 F.2d 465, 472 (7th Cir. 1984) (affirming FCC regulation requiring structural separation of BOCs' consumer premises equipment services); *Computer and Communications Indus. Assoc. v. FCC*, 693 F.2d 198, 218-19 (D.C. Cir. 1982) (affirming *Computer II*, structural separation requirements as to advanced services); *GTE Serve. Corp. v. FCC*, 474 F.2d 724, 732 (2d Cir. 1973) (affirming *Regulatory and Policy Problems Presented by the Interdependence of Computer and Communications Services and Facilities*, Final Decision and Order, 28 FCC.2d 267 (1971), structural separation requirements as to data processing services); *Bell Atlantic-GTE Merger Order* ¶¶ 260-73 (requiring structural separation of advanced services affiliates); *SBC-Ameritech Merger Order* ¶¶ 363-70 (same).

will help detect (and deter) the use of bundling to effect an anticompetitive price squeeze. If all rates are tariffed, a competitive carrier can determine how much the ILEC is effectively charging for DSL, and then compare this rate to what the ILEC is charging the CLEC for the wholesale inputs.

155. Maintaining the tariff requirement is especially important if the Commission does not adopt structural separation and affiliated transaction rules. When the Commission examined whether the RBOCs should be classified as dominant carriers in the long distance market, it specifically relied on the existence of such rules in concluding that there was little danger of a price squeeze. Because of these rules, the only way an RBOC could proceed with a price rise was by increasing the price of access not only to the interexchange carriers but also to its own long distance affiliate.¹⁶³ Here, by contrast, when an RBOC provides DSL service, it does not have to purchase access from an affiliate for the same price that the affiliate charges CLECs for wholesale access.

156. **Larger-Business Broadband Services.** The Commission should likewise require RBOCs to file tariffs of their larger-business broadband services in order to guard against anticompetitive price squeezes and discrimination. A tariff-filing requirement is even more important here than in the residential arena because without tariffs competitors will not be able to ascertain what prices the RBOCs are offering for their business broadband services. The pricing structures are far more complex than they are for residential DSL services. For instance, BellSouth currently offers frame relay ports at 20 different speeds, with prices that vary according to the speed as well as the duration of the contract. On top of that, the company has a

¹⁶³ *LEC Classification Order* ¶ 91.

separate charge for the committed information rate ("CIR") per data line connection identifier ("DLCI") that the frame relay network will maintain. BellSouth has 15 different ranges of CIR per DLCI, each with its own monthly rate (depending on the duration of the contract).¹⁶⁴

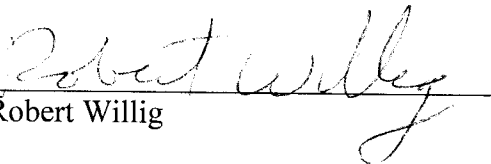
157. The details of tariffing broadband services are beyond my expertise. But at a minimum, a tariff should be required for any network in which 50% or more of the ports are within areas in which the RBOC is the dominant provider of local exchange or exchange access services. In addition, the incumbents should be required to tariff specific components, such as (1) ports within the RBOC's territory, (2) connections between ports if they are both within the RBOC's territory, and (3) access circuits within the RBOC's territory.

158. These tariffing requirements would involve little cost or burden, they would not have any anti-competitive consequences, and they could produce important benefits for the broadband markets.

¹⁶⁴ *IDC Packet/Cell-Based Report* at 47-48.

VERIFICATION PAGE

I, Robert Willig, declare under penalty of perjury that the foregoing is true and correct.


Robert Willig

Executed on February 27, 2002.